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Mount Vernon students help illustrate light-rail system in 3-D

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Using virtual-reality animation, Mount Vernon High students are helping transportation officials investigate the possible benefits and drawbacks of a light-rail system in the Indianapolis metro area.

The project will simulate a ride in a modern passenger train.

"The IMPO (Indianapolis Metropolitan Planning Organization) wants to do a 3-D visualization of a light-rail system going from Noblesville to Downtown Indianapolis," said Tom Shaver, technology education teacher at Mount Vernon.

Phase Two of the light-rail system would be a line from Downtown to Indianapolis International Airport. Phase Three would go from Downtown to Greenwood.

"We've been trying to communicate with property owners along the proposed corridor, and we did not have a way to illustrate to them what a system like this would be like," said Mike Dearing, an IMPO master planner.

"I had seen some of the things Mount Vernon has done. I knew these guys were good, and I just thought, 'What if they took a shot at visualizing in a 3-D way a potential system along that corridor?'"

Shaver agreed that Mount Vernon students were a logical choice to tackle the project.

"We're the only high school in the country that utilizes this VisionDome," Shaver said, referring to a "hemispheric" virtual-reality dome in which viewers watch 3-D presentations. The company markets the product as an "immersive display system."

School officials purchased \$60,000 worth of the equipment in 2003 with part of a grant shared by several Hancock County schools and organizations.

Mount Vernon students have helped produce other 3-D presentations, including one that focused on proposed facilities at Hancock Regional Hospital and another that gave viewers a virtual walk-through of downtown Fortville.

Indiana Superintendent of Public Instruction Tony Bennett visited the school Sept. 21 to see firsthand the work that has won Mount Vernon accolades.

"I was incredibly impressed with the commitment that the superintendent and the board and community have demonstrated to provide students these types of opportunities," Bennett said. "I'm also incredibly impressed with the work the students are doing."

In this case, the students' work will provide real-world benefits beyond simply receiving a grade, he added.

"Those types of projects bring learning to life, and they give learning incredible relevance to students," Bennett said. "I'm fascinated by the high level of work going on to prepare kids for a new

economy in the 21st century."

Students haven't begun work on the light-rail presentation, Shaver said. But several are excited about the opportunity.

"I've really come to enjoy animation and 3-D modeling and design," said Matt Remmel, 16, a junior.

"Instead of just having a blueprint, you can make it three-dimensional and have a virtual walk-through of it. That's a lot cooler than just looking at blueprints."

Senior Brett Eckert, 18, agreed.

"Most of the time in school, they tell you to look at these books and do these problems, but now we actually get a chance to do something," Eckert said. "It's like a construction worker who can look at something and say he helped build it. We can look at this light-rail project and say we helped put it together."

Though Mount Vernon is responsible for the most high-tech aspect of the presentation, several other area schools -- including another suburban Eastside school, Warren Central -- also will play roles in the light-rail presentation, Shaver said.

"One school may use a government class to study economic effects of taking commuters from vehicles to a light-rail system," Shaver said. "Another may look at environmental impact. A speech class might provide the narration."

Others projected as partners on the presentation are Tech, Ben Davis, Brownsburg and Lawrence Central high schools, Shaver said.

Bennett has invited students from each of the schools to attend an Indiana State Board of Education meeting in the late spring to show their presentation.
